

# **A SCHEV REPORT**

## **Space Utilization and Comparison Report**

***May 2004***  
*(Revised June 2004)*



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## PREFACE

The State Council of Higher Education for Virginia (SCHEV) in accordance with the 2003 Virginia Acts of Assembly presents this report.

*2003 Virginia Acts of Assembly, Chapter 1042, Item 166-I.3. “The State Council shall evaluate how institutions of higher education are utilizing their academic space and how utilization standards established by the Council compare to those in other states. The State Council shall report its findings to the Chairmen of the Senate Finance and House Appropriations Committees no later than May 15, 2004.”*

This report has been created to provide information on how public institutions of higher education in Virginia utilize their Educational and General space as well as compare the State Council of Higher Education for Virginia’s space utilization guidelines with those used in other State Higher Education Executive Offices. The State Council developed the current space inventory and space utilization system in the late 1970’s and early 1980’s. Utilizing the technology of the day the State Council built a comprehensive data collection and analysis system to ensure accurate space inventory and utilization metrics. The utilization collection method has changed little over the past 20 years, it is based on data collected from the registrar that includes information on each course section taught and the number of students registered for the section along with the room number for the room in which the course is delivered. SCHEV staff analyzes this data and produces the overall classroom and class laboratory room and station utilization rates.

## KEY FINDINGS

- Virginia institutions that reported data have made modest to impressive improvements in their utilization rates. VMI increased their weekly classroom utilization by 40% (10 hours per week to 14 hours per week) over their reported 2000 utilization. VSU increased their classroom station utilization by 37% and their Class lab station utilization by 57% over their reported 2000 utilization.
- Virginia's Classroom and Class Lab utilization guidelines are slightly less stringent than the average of all the states that use utilization as criteria for capital construction planning.
- Several states have been unable to collect information on utilization or apply their utilization guidelines in the past few years due to budgetary considerations.
- Virginia is more stringent on Classroom Station use than North Carolina, South Carolina, and Tennessee. West Virginia, Kentucky and Tennessee are more stringent on Class Lab Station use than Virginia.
- Oklahoma has the highest Classroom Station use rate at 48 hours per week as well as the highest Class Lab use rate at 38 hours per week. Louisiana and Kansas tie for the lowest Classroom and Class Lab Station use rates at 18 hours per week and 16 hours per week respectively.
- There is good reason to set the utilization bar high. California, Colorado, Oklahoma, and Utah have chosen to set the bar very high to meet specific needs in their higher education systems. California has twice in the past decade commissioned a study to reduce their utilization guidelines. The findings of both studies indicate that the guidelines should be maintained at their current high level due to impressive improvements that have saved California millions of dollars in additional capital construction cost. As a result California's space utilization guidelines have not been reduced in the past decade.
- The State Council of Higher Education for Virginia's space utilization guidelines are reasonable and should remain unadjusted. A better understanding of the importance of these guidelines is needed. Encouragement on behalf of SCHEV for each institution to strive for more productive use of instructional space is also needed.

## INTRODUCTION & SUMMARY

### Introduction

*Why does the State Council use utilization and what is asset productivity?* As part of the capital outlay recommendation process (see Appendix A), before SCHEV recommends the commitment of scarce public resources to construct new instructional space there must be an indication that the institution's existing resources are being used productively. SCHEV requires that the college or university is using their existing classrooms and class labs at a minimum level. This minimum level is the SCHEV classroom and class lab utilization guidelines. For the State Council, the term asset productivity is used to express the amount of available instructional time the educational assets (classrooms and class labs) of the institution are utilized. Space utilization is the measure of productivity.

The State Council has ascertained over its 47 years of service to higher education in the Commonwealth that the number of hours instructional space is used is directly proportional to the need for additional and expensive facilities. SCHEV is not alone in this regard as there are 25 states that in some form use classroom and/or class lab utilization as a measure of efficient facility use. The number of states that have some form of utilization measure was determined by a national survey conducted by SCHEV. The results of this survey are presented in Appendix C.

Alternative schools of thought suggest that lower utilization adds to the campus atmosphere or enhances the educational delivery by having fewer students in each class or offering fewer sections of a class. The State Council's stance is that the students,

faculty and staff generate the institutional atmosphere at Virginia's exceptionally diverse institutions, not the course offerings or space utilization rates. Class sizes are a product of the institution's assets. The SCHEV utilization guidelines do not penalize for size but rather occupancy. If the institution schedules a 30 person course section in a 100 seat lecture hall, it is considered an inefficient use of space and the guideline requires at least 60 students to be considered as using the asset, in this case the lecture hall, productively. Using the SCHEV guideline occupancy still leaves every third seat empty. For a class lab, the guideline indicates that four out of every five seats should be occupied. This is because, in general, class labs are more expensive assets to construct and furnish. These rooms usually contain costly specialized equipment, so while they may not be used as often due to their specialized nature, they should have a higher percentage of stations occupied when in use. An hour of occupancy is 50 minutes for the purposes of this analysis. This allows ten minutes for student travel between rooms as classes change.

### Utilization Reporting

The purpose of the Space Utilization Report is to measure the extent to which Virginia's public institutions of higher education are using their instructional space productively. In particular, this report contains information as to how well the institutions are using their classrooms and class laboratories. This information, in conjunction with the Council's space utilization guidelines, comprises a portion of the criteria employed in assessing capital outlay requests (see Appendix A). Utilization is a biennial data collection. The information presented is based on data reported by the institutions in 2000 and 2003. 2003 is an out year for utilization reporting and many

institutions were unable to submit current data. The institutions that did submit new data for 2003 were, JMU, VCU, VMI, VSU, and VT. Unfortunately SCHEV was unable to compile VCU and VT's data for this report. While institutions use other types of E&G space, such as libraries and research space intensively, the use of these types of space is not scheduled on a regular basis as classrooms and class laboratories. The focus of this report is to determine how well institutions make use of classrooms and class laboratories and how SCHEV guidelines (see Appendix B) compare with other State Higher Education Executive Offices (SHEEO's).

The utilization of classrooms and class laboratories is measured in three ways:

- (1) The average number of hours per week that the rooms are used.* The Council has established a guideline that suggests institutions should be using classrooms an average of 40 hours per week and class laboratories an average of 24 hours per week.
- (2) The average proportion of stations or seats in classrooms and class laboratories that are filled when the rooms are in use.* The Council's guideline for this measure states that institutions should fill an average of 60 percent and 75 percent of the stations/seats respectively in classrooms and class laboratories when they are in use.
- (3) The average number of hours per week that the stations are used.* This measure combines the average number of hours a classroom or class laboratory is used with the percentage of space used during that time. The Council's guideline for this measure establishes an average of 24 hours per week for classrooms and 18 hours per week for class laboratories.

Instructional space utilization is one of the primary criteria for determining whether an institution can justify the need for additional classroom or class laboratory space based on current utilization levels. Virginia uses instructional space utilization data to set priorities for capital projects. An institution in Virginia that does not meet or exceed the utilization guidelines will at best receive a number 2 priority for new additional instructional space. More than any other state, Virginia must have reasonable space utilization guidelines because the guidelines are a balance between resources and capacity.



## **Classrooms**

Charts 1A and 1B illustrate classroom utilization and classroom station utilization by institution. Each institution's utilization measures are referenced against the Council's utilization guidelines and the institution's most recent performance measure. Appendix A, B, & D provides a more detailed description of defined terms and the guideline methodology.

Chart 1A.

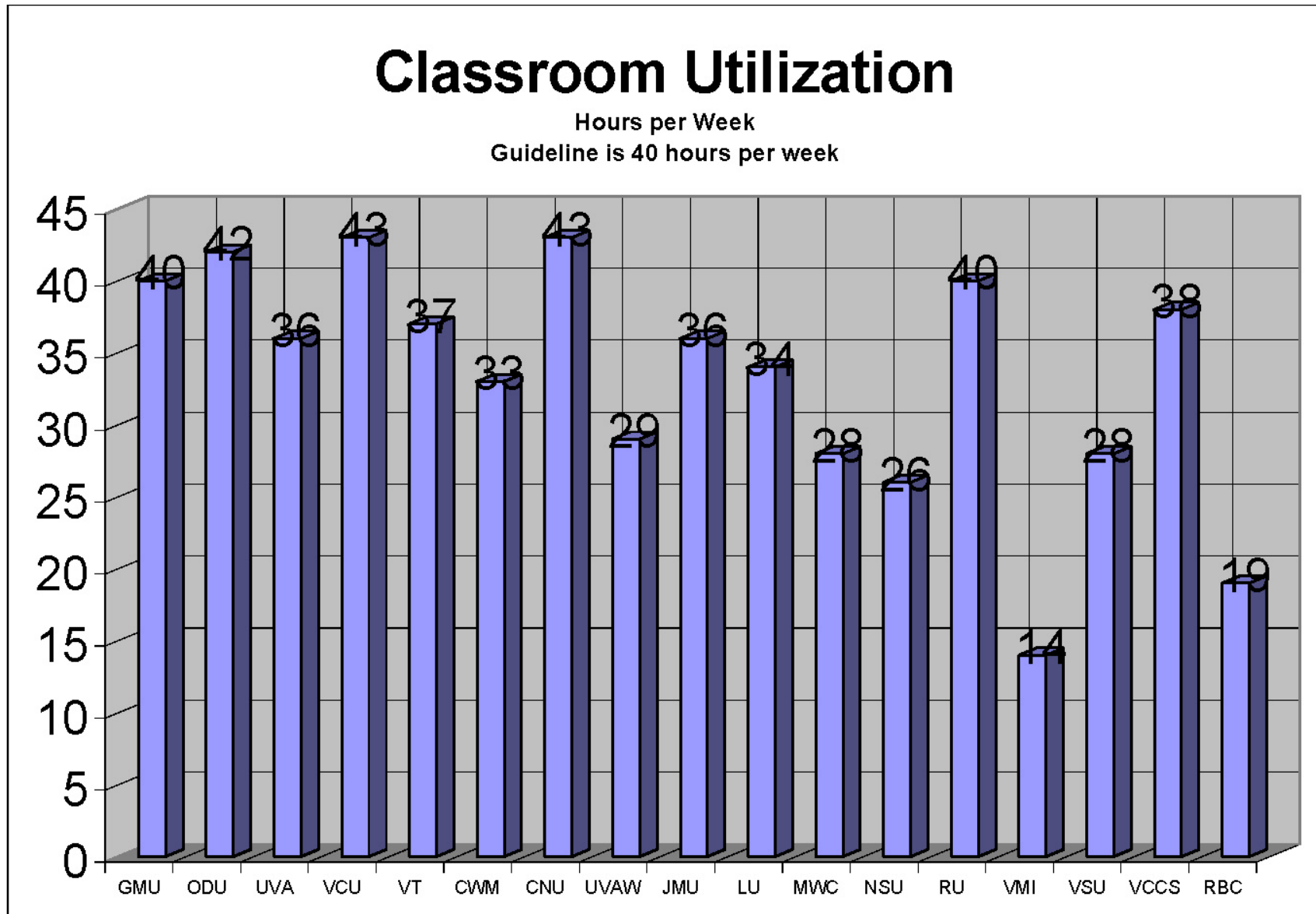
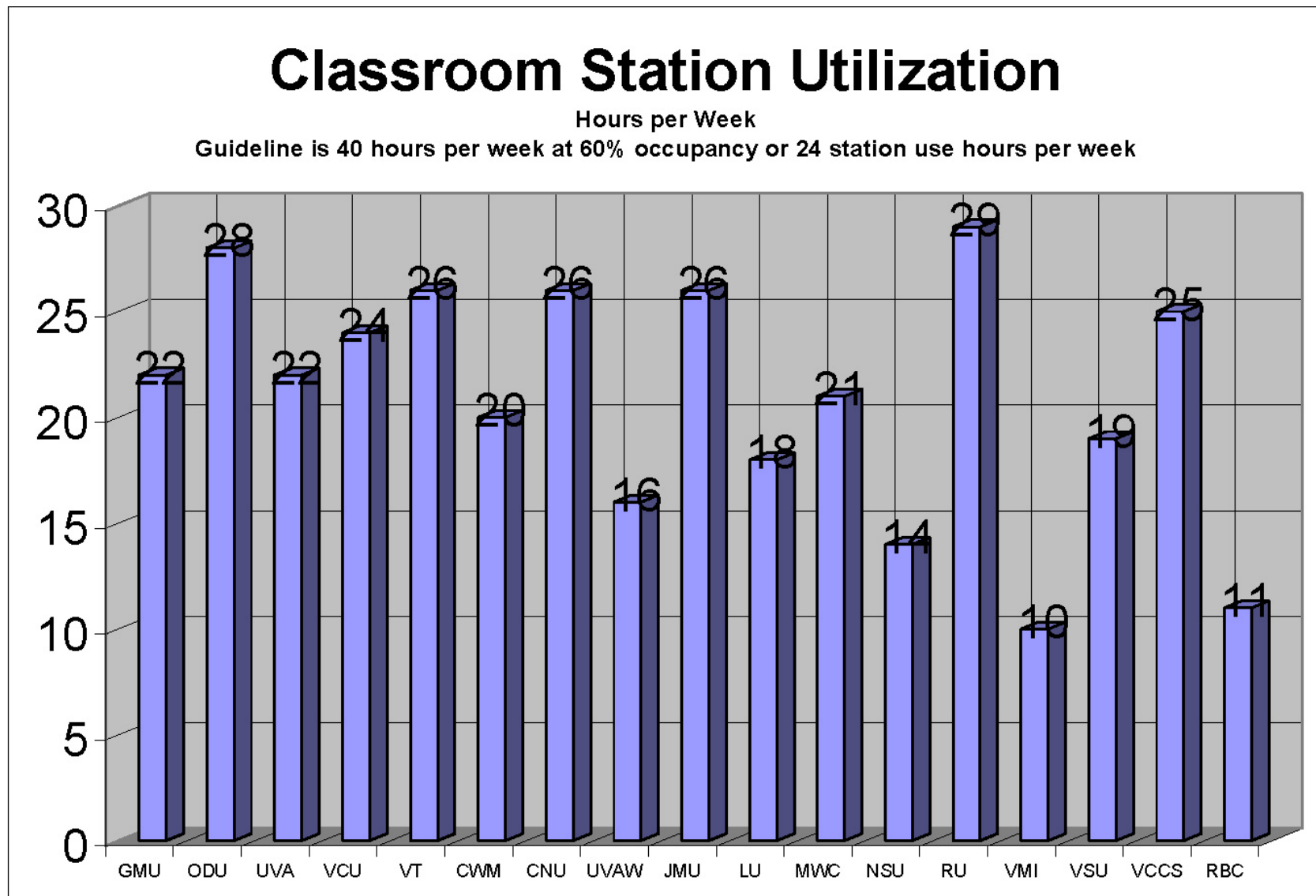


Chart 1B.



## **Class Laboratories**

Charts 2A and 2B illustrate class lab utilization and class lab station utilization by institution.

Each institution's utilization measures are referenced against the Council's utilization guidelines and the institution's most recent performance measure. Appendix A, B, & D provides a more detailed description of defined terms and the guideline methodology.

Chart 2A.

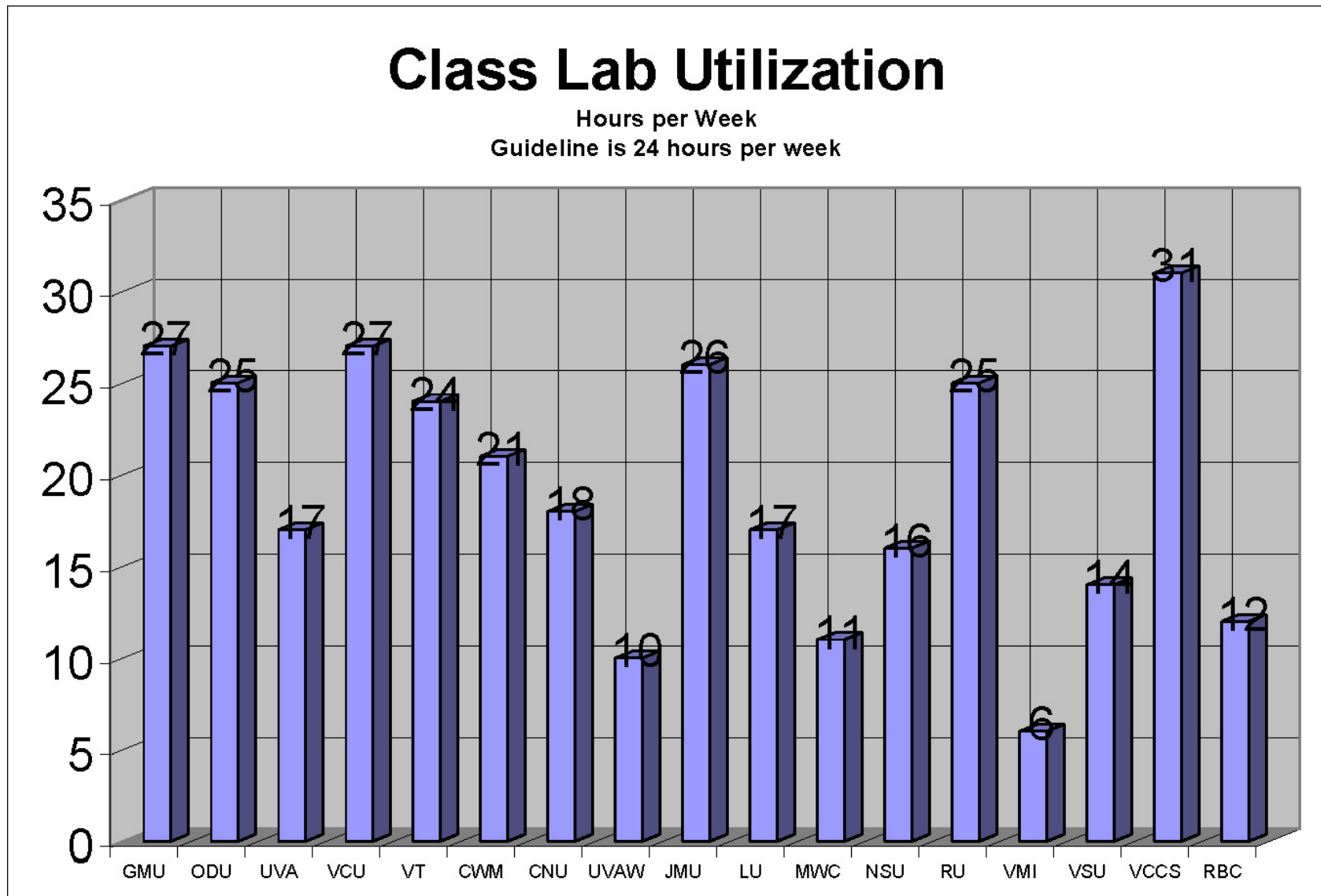
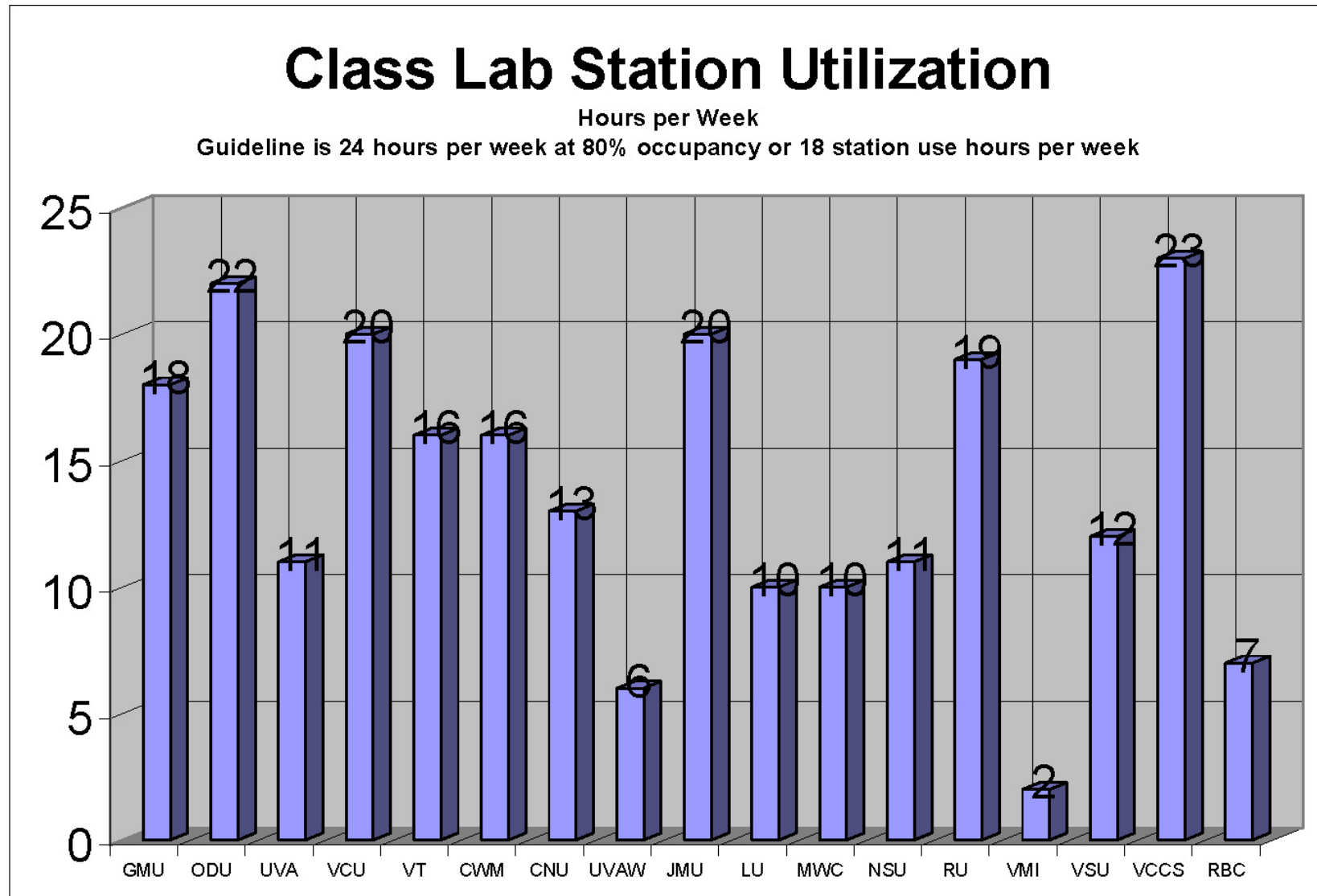


Chart 2B.



## Summary

### *How Do Virginia's Utilization Guidelines Compare with Other States?*

Using data retrieved from 20 states (see Table 1 and Appendix C) including Virginia the average guideline for classroom usage is 40 hours per week. The average classroom station usage is 26 hours per week. For class labs the average usage is 26 hours per week. The average for class lab station usage is 20 hours per week. SCHEV provides the utilization guidelines in hours per week and percent occupancy. Converting the number above to the SCHEV format would result in a classroom guideline of 40 hours per week at 65% occupancy. The existing SCHEV guideline for classrooms is 40 hours per week at 60% occupancy. In the area of classroom utilization SCHEV is slightly less stringent than the average. The equivalent guideline for class labs would be 26 hours per week at 77% occupancy. The existing SCHEV guideline for class labs is 24 hours per week at 80% occupancy. Once again the SCHEV guideline is slightly less stringent than the average.

**Table 1: A comparison of the average of 20 states' space utilization guidelines with those of Virginia.**

Table 1	All States (20) Average Hrs per week	Virginia (SCHEV Guideline) Hrs per week
Weekly Classroom Usage	40	<b>40</b>
Weekly Classroom Station Usage	26 (40 hours at 65%)	<b>24 (40 hours at 60%)</b>
Weekly Class Lab Usage	26	<b>24</b>
Weekly Class Lab Station Usage	20 (26 hours at 77%)	<b>18 (24 hours at 80%)</b>

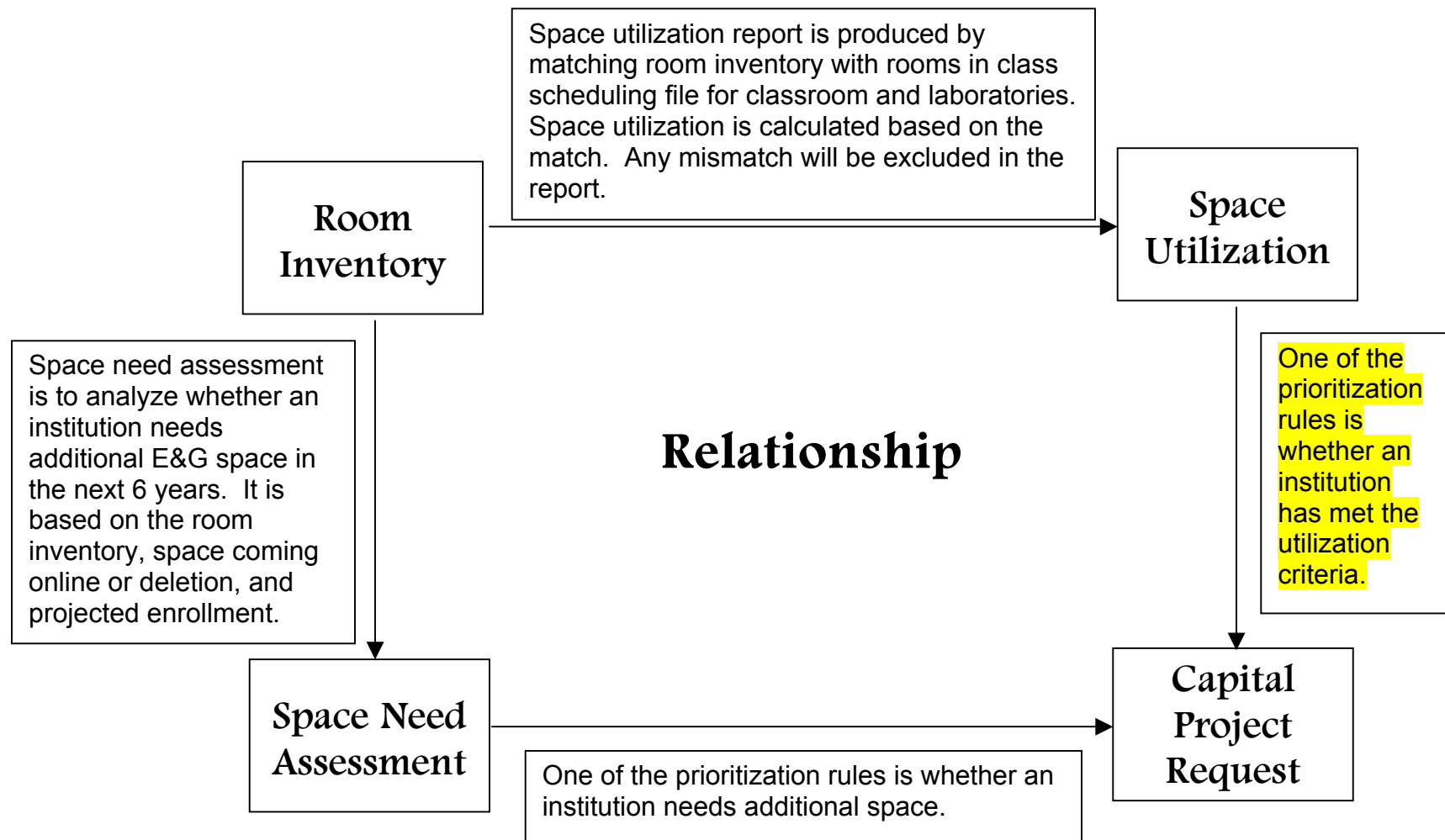
As an example using the largest higher education system in the nation, California could accept an additional 54,000 students if they could raise their instructional space utilization by

one hour per week. California currently enrolls about 2.67 million students. The benefit for Virginia is not as dramatic but this demonstrates the impact of space utilization. Table 1 provides a comparison of all states that have and use utilization guidelines and Virginia's utilization guidelines.

Some questions for further discussion include: Do space utilization guidelines discourage institutions from pursuing distance education opportunities? How will distance education affect the need for capital construction in Virginia? Will high-speed Internet access supplant Teletechnet? As the on-campus impact of off campus enrollment overwhelms the academic student support services units at our institutions, how will we treat academic support services and their need for space, provided to off-campus students?



### SCHEV Capital Outlay Prioritization Process Chart



## Appendix B

### **Excerpt From SCHEV Fixed Asset Guidelines (2001) p. 11**

#### **A. Space Utilization Guidelines for Educational and General Space, Except Research**

Definition: Space used for the E&G functions of instruction and academic support, libraries, public service, student services and institutional support, and physical plant.

The Guidelines: Measurements of productivity apply both at the institutional level and at the levels of classroom and laboratory space.

1. The actual utilization of all E&G space at each institution will be compared to the total amount of E&G space (except research space) that the space need guidelines (Section I) define as needed by that institution.
2. Within the educational and general space at an institution, the guideline for the utilization of all classroom stations (seats) is an average use of at least 24 hours a week. This guideline is the equivalent of using classrooms an average of 40 hours a week and filling an average of 60 percent of the stations in those classrooms when they are in use.
3. Within the E&G space of an institution, the guideline for the utilization of all class laboratory stations is an average use of at least 18 hours a week. This is the equivalent of using class laboratories an average of 24 hours a week and filling 75 percent of the stations in those laboratories when they are in use.

This guideline will be applied based on the type of space requested. Specifically, when the dominant amount of space requested is instructional and academic support space, the classroom station utilization and the class laboratory station utilization will be the units of measure. The utilization measure for all other space requests will be the utilization of all E&G space (except research). In order to satisfy the requirement that institutions are using their space well, for non-instructional/academic support space, the institutions will be required to meet SCHEV's guideline as described in item 1 above. For instructional and academic support space, institutions will be required to meet either SCHEV's guideline or their performance targets for classroom station use and class laboratory station use.

## Appendix C

### SCHEV National Survey Results for State Space Utilization Guidelines

State		Policy	Data Collected (Annual, Biennial, Continuous)	CR (Room Use Hours)	CL (Room Use Hours)	CR (Station Use Hours)	CL (Station Use Hours)	
Arizona	1999	Y	A	32	25	20	20	15 hours/week is FTE, Class Labs is Type A, 18 hrs/week for Group B, 9 hrs./week for Group C
California	1970/1973	Y	A	53	27.5	35	23	15 hours/week is FTE (2001)
Colorado	1999	Y		60	40	42	32	15 hours/week is FTE
Florida	1994	Y	A	40	20	24	16	No longer used, however may be revised and applied.
Iowa		Y	B	30	20	20	16	From ISU Report
Kansas	1998	Y	B	30	20	18	16	
Kentucky	1999	Y	B	36	23	24	19	FTE is 16 Credit Hours
Louisiana		Y	A	30	20	18	16	Only 2 of 20 institutions met guideline in 2002
Minnesota		N	A	30	N/A	18	N/A	UMN - only
Nebraska		Y	B	30	20	20	13	Not repealed but no longer used for Capital Planning.
Nevada		Y		43	29	26	23	
New Hampshire	1989	Y		30	24	18	16.5	Class Lab Utilization has a range from 18 to 24 hours.
North Carolina		Y	A	35	20	23	15	12 hours/week is FTE
Ohio		N	A	28	20	N/A	N/A	Maximum expected utilization for planning only.
Oklahoma	1977	Y	A	60	48	48	38	
Oregon	1994	Y	A	33	22	20	18	Class Lab usage is lower division.
Pennsylvania		N	C	36	-	27	-	- PSU only as a goal, accountability measure only.
South Carolina		Y	A	30	24	20	18	
Tennessee	1999	Y	A	30	24	20	20	Not enforced recently due to economic conditions.
Texas	2002	Y	A	38	25	30	20	
Utah		Y	A	45	28	34	22.5	
<b>Virginia</b>	<b>2001</b>	<b>Y</b>	<b>B</b>	<b>40</b>	<b>24</b>	<b>24</b>	<b>18</b>	<b>30 hours on an annual basis is one FTE</b>
West Virginia	2003	Y	C	42	35	25	21	Still implementing system.
Wisconsin		Y	A	30	N/A	20	N/A	Used for efficiency improvement only, not capital planning.
Wyoming		Y	A	55	28	33	20	
CR is Classroom								CL is Class Laboratory

## Appendix D

### Terminology

- **CLASSROOMS** – Rooms used by instructional classes, which do not require special-purpose equipment for student use. Included in this category are rooms generally referred to as lecture rooms, seminar rooms, lecture-demonstration rooms, and general-purpose classrooms.
- **CLASS LABORATORIES** – Rooms used by regularly scheduled instructional classes that require special-purpose equipment for student participation, experimentation, observation or practice in a field of study.
- **WEEKLY HOURS OF ROOM USE** – The average number of hours per week rooms are scheduled for use.
- **STATION** – A place for one student to receive instruction in an instructional classroom or class laboratory. It is normally a desk, seat, chair, laboratory table, or other suitable furnishing.
- **PERCENT OF OCCUPANCY** – The average proportion of stations in classrooms and class laboratories that are used when the rooms are scheduled for use.
- **WEEKLY HOURS OF STATION USE** – The average number of hours per week stations are scheduled for use.
- **PERFORMANCE MEASURES** – The Commonwealth Core Performance Measures were developed by the Department of Planning and Budget (DPB) in consultation with the Virginia public institutions. Institutions are required to report their performance in relation to these measures to DPB annually. In addition, these performance measures are presented in the Report of Institutional Effectiveness published by SCHEV.

Appendix D Continued  
**Methodology for Space Utilization Guidelines**

**CLASSROOMS**

Weekly Hours of Room Use	--	40 hrs.
Percent of Station Occupancy When Room is in Use	--	<u>x 60 %</u>
Weekly Hours of Station Use	--	24 hrs.

**CLASS LABORATORIES**

Weekly Hours of Room Use	--	24 hrs.
Percent of Station Occupancy When Room is in Use	--	<u>x 75 %</u>
Weekly Hours of Station Use	--	18 hrs.



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